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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,554	10/01/2003	Leonard D. Rarick	SUN03-0078	7656

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EXAMINER	
LIPMAN, JACOB	

ART UNIT	PAPER NUMBER
2134	

MAIL DATE	DELIVERY MODE
12/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s) <i>mn</i>	
	10/676,554	RARICK ET AL.	
	Examiner	Art Unit	
	Jacob Lipman	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-12 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-12 and 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 4-12 and 16-18 in the reply filed on 23 October 2007 is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 7-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim 7 recites the limitation "a third exclusive-or-operator having two inputs", but then outlines three inputs, the Left hand input, the output from the first transistors, and the output from the first XOR. This leaves the claim confusing and indefinite. Claims 8 and 9 depend on 7, and therefor have the same issue.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
6. Claims 4-12 and 16-18 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. There is no claimed output or result from the unit performing an algorithm.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 4-12 and 16-18 as best understood are rejected under 35 U.S.C. 102(b) as being anticipated by Schneier in Applied Cryptography.

With regard to claims 4 and 10 Schneier discloses an execution unit adapted to perform at least a portion of the Data Encryption Standard (page 270 12.2), the execution unit including a Left Half input (page 270 par "DES operates", left half), a Key input (page 270 par "DES operates"), a Table input (pages 274, S-boxes), a first group of transistors configured to receive the Table input, perform a table look-up, and output data (page 274 par "each s-box"), a first exclusive-or operator having two inputs and an output, the first exclusive-or operator configured to receive the Left Half input and the Key input (page 270 par "in each round"), a second exclusive-or operator having two inputs and an output, the second exclusive-or operator configured to receive the data output by the first group of transistors and the output of the first exclusive-or operator (page 270 par "in each round", sent through 8 S-boxes), and a third exclusive-or operator having two inputs and an output, the third exclusive-or operator configured to receive the Left Half input and the data output by the first group of transistors (page 270 par "in each round", output combined with left via another XOR).

With regard to claims 5 and 11, Schneier discloses multiple groups of transistors for performing the encryption (page 278 par "much has").

With regard to claims 6 and 12, Schneier discloses the OFB method runs this algorithm (page 277 "Modes of DES").

With regard to claims 7-9, Schneier discloses combining the results of the first two XORs (page 270 par "in each round")

With regard to claims 16-18, Schneier discloses performing the algorithm multiple times and shifting in the tables (page 270 par "DES operates").

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Lipman whose telephone number is 571-272-3837. The examiner can normally be reached on M-Fr.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on 571-272-3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JL

A handwritten signature in black ink, appearing to be "JL" followed by a stylized flourish.